REMARKS

Claims 1-15 are all the claims pending in the application. By this Amendment, Applicant editorially amends claims 1, 3, 5-8 and 10-12. Claims 1, 3, 5-8 and 10-12 were made for reasons of precision of language and consistency, and do not narrow the literal scope of the claims and thus do not implicate an estoppel in the application of the doctrine of equivalents. The amendments to claims 1, 3, 5-8 and 10-12 were not made for reasons of patentability.

In addition, by this Amendment, Applicant adds claims 14-15. Claims 14-15 are clearly supported throughout the Specification, for example, see pages 4-7 of the Specification.

I. Summary of the Office Action

The Examiner objected to the specification and the drawings. In addition, the Examiner rejected claims 1 and 8 under 35 U.S.C. § 112, first paragraph, claims 1 and 8 under 35 U.S.C. § 112, second paragraph, claims 1-7 and 13 under 35 U.S.C. § 102(b) and claims 8-12 under 35 U.S.C. § 103(a).

II. Preliminary Remarks

The Examiner has indicated on the form PTOL-326 that the Specification is objected to; however, no reasons are provided in the detailed office action. Therefore, the Examiner's withdrawal of the objection is submitted to be appropriate. Alternatively, an explanation should be provided.

Drawings

III. Objection to the Drawings

The Examiner objected to the drawings under 37 CFR 1.83(a). The Examiner stated that the drawings must show every feature of the invention specified in the claims. Therefore, the tabulation process must be shown or the feature(s) canceled from the claim(s). However, Figs. 3 and 5 clearly show an exemplary, non-limiting embodiment of the tabulation process (Fig. 3 is a block diagram of the tabulation system and Fig. 5 shows an exemplary resulting array). Therefore, it is appropriate and necessary for the Examiner to withdraw this objection to the drawings.

IV. Rejection under 112, first paragraph

The Examiner, now, in this third office action, asserts that the subject matter of the original independent claims 1 and 8 are not described in the specification in such a way as to enable one of ordinary skill on the art. In particular, the Examiner asserts that the specification and the figures do not describe how tabulation is performed. The Examiner's *careful reconsideration* is submitted to be appropriate in view of the following comments.

Claims 1 and 8 recite a tabulation stage in which, for each data record, a cell of a result array is determined based on the numerical identifiers for that record, and the result array cell is incremented. An exemplary, non-limiting embodiment of the tabulation stage is described in great length in the Specification. For example, Fig. 3 is an example of a tabulation system in block diagram and Fig. 5 shows an exemplary resulting array with cells 1...x.

In particular, the tabulation subsystem uses files created in the pre-processing subsystem to enable faster tabulation of data. For example, the tabulation subsystem receives requests for

Does not show how tabulation is performed

tabulation. A tabulation request specifies a plurality of field tuples, where each field tuple specifies a field of the data file. Upon receiving the request, the tabulation unit formulates an empty result array in the form of a one-dimensional array for storing integer values (page 6, lines 20 to 25 of the Specification). The number of cells in the array is determined by the product of the number of distinct values in each field specified in the tabulation request (Fig. 5). Also, an algorithm for mapping of a cell to a particular combination is explained (see page 6, line 25 to page 7, line 10). Furthermore, it is respectfully submitted that it is certainly well within the skill of the person familiar with this field to implement the provided algorithm. Since enablement relates only to that which is claimed, and since the claims are clearly enabled (as described above), it is now appropriate and necessary for the Examiner to withdraw this rejection of independent claims 1 and 8 and their dependent claims 2-7 and 9-13. Finally, if the Examiner still maintains this rejection, the Examiner should suggest how the rejection can be removed in order to expedite prosecution of this case. *See* MPEP § 2164.04.

V. Rejection under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 1-13 under 35 U.S.C. § 112, second paragraph. In particular, the Examiner asserts that the terms "distinct", "field", "cell of a result array" and "tabulation" to be indefinite. Each of these terms is addressed below.

"Distinct"

This term has already been discussed at length. In the Amendment under 37 C.F.R. § 1.111 filed December 19, 2002, a thorough explanation was provided as to why the term "distinct" is definite. In fact, several exemplary definitions from a dictionary were provided. In

response, in the final office action of February 20, 2003, the Examiner did not maintain this rejection and did not respond to the arguments presented in the Amendment filed on December 19, 2002. The Examiner should first respond to the arguments already presented in the Amendment filed on December 19, 2002.

In addition, the Examiner alleges that the manner in which "data value" is semantically different from "distinct data value" should be disclosed to avoid indefiniteness (see page 3 of the Office Action). Obviously, "data values" can all be the same, whereas distinct data values are not equal. For example, during the pre-processing-stage, for the field SEX, male is one distinct value and female is another distinct value. As another example, see page 5 of the Specification, lines 16 to 26, where the distinct field values are assigned a unique numerical code, unique to that particular field).

The difference between data values and distinct data values is well understood by not only the artisan of ordinary skill in this field, but even by mere apprentices in the field. For example, the Examiner may refer to any introductory textbook on databases and find discussions of data integrity and the difference between values of a field and distinct values.

Therefore, it is appropriate and necessary for the Examiner to withdraw this rejection. Alternatively, if the Examiner still maintains a 112 rejection, the Examiner should suggest how the rejection can be removed in order to expedite prosecution of this case. *See* MPEP § 2173.02.

"Field"

Next, the Examiner asserts that the term "field" is indefinite. In particular, the Examiner asserts that it is unclear how fields are defined. The specification uses the term "field" as corresponding to each type of data (e.g., sex, area, etc.) as well as each particular instance, data value (e.g., male, female, etc.). The Examiner's pointing out, with particularity, the aspects of the claim thought to be indefinite is gratefully noted. Claims 1, 3, 5-8 and 10-12 are now amended to refer to each type of data as "data type field".

Even though the claims are herein amended, it is pointed out with respect that the term "field" is well known in this field, and a very basic term in data processing. The person of ordinary skill understands the concept of "field". The specification need not be written to include a foundation in computer science for the person off the street, but only to teach the invention to the artisan of ordinary skill. As such, it is respectfully submitted that the claims are not properly rejectable under 35 U.S.C. §112, ¶2. It is now appropriate and necessary for the Examiner to withdraw this rejection in view of these self-explanatory claim amendments being made herein.

"Cell"

Next, the Examiner asserts that the term "cell" is unclear. In particular, it is unclear how many values a cell can hold. However, breadth of the claim is not to be equated with indefiniteness. MPEP § 2173.04. The claims broadly define the cell and are not limited to any particular number of values. For example, each cell can store a number of records containing a combination of distinct data values for different field types (e.g., all males residing in area A or

all females in areas A and B, etc.). Although "cell" is meant to be construed as broadly as possible in accordance with its ordinary and customary meaning, perhaps the point will be well illustrated by an analogy. Here, the analogy is that of a chest of drawers. The chest has drawers, and each drawer can hold many very different items. The drawers are held in place by a frame. A claim to a chest having a frame and a plurality of drawers would not be indefinite for failure to say what is in the drawers. The point is the drawers, not the infinite number of things that could be stored inside, or how many things are in a given drawer at a given point in time.

The analogy here is that the cell is analogous to the drawer. The cell is a structural element and it does not matter what is in the cell. The claim element should be broadly interpreted.

Other points

In addition, the Examiner asserts that claims are indefinite for failure to specify the format of the result array and what is being incremented. A resulting array is a structure with at least one cell. One of ordinary skill in the art would understand what a resulting array is. The meaning of "array" is no mystery to the artisan of ordinary skill. The meaning of "resulting" is likewise clear. The term "resulting array" is straightforward.

Moreover, the Examiner objects to claims 1 and 8 alleging that it is unclear what is being incremented. One of ordinary skill in the art would readily understand what is being incremented. However, for the sake of expediting prosecution, claims 1 and 8 are amended to recite that a resulting value in the cell is incremented. As a result, the Examiner should withdraw this rejection in view of this self-explanatory claim amendments.

The Examiner's insistence on defining in the claims the meaning of terms common to this particular art is not understood, and it is respectfully submitted that there is no legal requirement that Applicant include such definitions.

It is respectfully submitted that the artisan of ordinary skill could now read the claims on file and understand the broad scope of patent protection sought to be protected. The MPEP, in §2173.05(a), states:

> If the claims, read in light of the specification, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the statute (35 U.S.C. 112, second paragraph) demands no more. *Shatterproof Glass Corp. v. Libbey Owens Ford Co.*, 758 F.2d 613, 225 USPQ 634 (Fed. Cir. 1985).

Since the claims would reasonably apprise the artisan of ordinary skill as to their scope, it is respectfully submitted that the claims meet the requirements of 35 U.S.C. § 112, ¶2.

In short, claims 1-13 are sufficiently definite in light of these self-explanatory claim amendments and arguments presented above. Therefore, it is appropriate and necessary for the Examiner to withdraw these 112, second paragraph, rejections.

VI. Claim Rejections under 102

The Examiner rejected claims 1-7 and 13 under 35 U.S.C. § 102(b) as being anticipated by USP 5,212,639 to Sampson et al (hereinafter "Sampson"). This ground of rejection is submitted to be incorrect for the following reasons. Of these claims, only claim 1 is independent. Claim 1 recites a novel combination of elements not found in the cited references. For example, the present invention has a plurality of records in a plurality of data type fields.

Also, in the present invention, for example, each distinct value is identified and allocated a numerical identifier unique for that data type field.

The Examiner asserts that Sampson teaches a method of data tabulation as set forth in claim 1. In particular, the Examiner asserts that Sampson's account number is equivalent to data type field as set forth in claim 1. In addition, the Examiner asserts that Sampson's assigning separate sectional numbers for every account is similar to identifying each distinct value and allocating a numerical identifier unique for that field as set forth in claim 1.

Sampson teaches an apparatus and a method for creating a database. In particular, Sampson teaches reading in an array, accounts related to the journal entries that need to be summarized from the data source 31. Next, the array is doubled by creating account-sectional numbers (e.g., one for credits and one for debits) (Fig. 5; col. 9, lines 8 to 20). Then, a sparse matrix is selected based upon the number of accounts posted in the journal entry, into this matrix dollar amounts associated with the account section (credit/debit) are added to the existing amount in this account section (Fig. 6, col. 9, lines 45 to 64).

However, Sampson teaches that for every account number, separate sectional numbers are created. That is, Sampson just teaches creating account-section numbers by adding separate designations (e.g. one sectional number for debit and one sectional number for credit) to the account number (col. 9, lines 12 to 20, 26 to 30). Sampson fails to teach or suggest identifying a distinct data value and allocating to it a unique numerical identifier. In Sampson, the sectional numbers are just created and assigned to each account number. They are created from nothing and are the same for each account number. No identification is needed in Sampson's method.

Moreover, the Examiner equates account number with a data type field and as such interprets that each account number is a different data type field. However, account number symbolizes an item number (col. 3, lines 40 to 48). An item number is somewhat similar to name or ID as described in an exemplary, non-limiting embodiment of the present invention (*see* Table 2, Figure 2 and pages 4-5 of the Specification). Each account number is a data value and not a new data type field. Account numbers are of one type of data field (e.g. integer) and each particular account number is just a different data value.

Therefore, *identifying distinct data values and data type fields* as set forth in claim 1 is not suggested or taught by Sampson, which lacks identifying distinct values for each data type field. For at least these reasons, independent claim 1 is patentably distinguishable from Sampson. Therefore, the Examiner's reconsideration and withdrawal of this rejection of independent claim 1 is appropriate. Also, claims 2-7 and 13 are allowable at least by virtue of their dependency on claim 1.

VII. Claims Rejections under 103

The Examiner rejected claims 8-12 under 35 U.S.C. § 103(a) as being unpatentable over Sampson in view of USP 5,748,878 to Rees et al. (hereinafter "Rees"). This ground of rejection is submitted to be incorrect for the following reasons. Of these claims, only claim 8 is independent. Claim 8 also recites that each distinct data value is identified and a numerical identifier unique for that data type field is provided. This limitation is similar to the limitation of identifying distinct data values and allocating unique identifiers for that data type field recited in claim 1. Since claim 8 contains features that are similar to the features argued above with

respect to claim 1, those arguments are respectfully submitted to apply with equal force here. Therefore, as explained hereinabove, Sampson does not meet all the requirements of independent claim 1. Rees is relied upon only for its teaching of a preprocessor and a separate processor for data reduction (see page 7 of the office action). Clearly, it fails to cure the deficient teachings of Sampson.

Moreover, there is no motivation to combine the two references. One of ordinary skilled in the art confronted with Sampson's problem of creating a database would never have turned to a reference like Rees. Rees teaches a system for analyzing the execution of the software in an embedded system. Specifically, Rees teaches that the tags received from the tag buffer 112 are processed by data reduction processor 114 and the resulting data is stored in a database (col. 7, lines 58 to 67; col. 8, lines 52 to 59). That is, one of ordinary skill in the art confronted with a problem of creating a convenient database (e.g. for accounting) would never have turned to Rees, a reference which deals with analyzing executed software.

For at least these reasons, therefore, it is appropriate for the Examiner to withdraw this rejection of independent claim 8. Claims 9-12 are patentable at least by virtue of their dependency on claim 8.

VIII. New claims

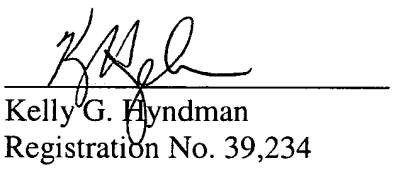
In order to provide more varied protection, new claims 14 and 15 are added. Claim 14 is patentable over the prior art references cited by the Examiner at least because it recites identifying distinct data values for each data type field. Claim 15 is patentable at least by virtue of its dependency on claim 14.

IX. Conclusion and request for telephone interview.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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